Hands On (Homework 6)
Screencast: 25-mariadb-hands-on.webm or 25-mariadb-hands-on.mp4

Install it:

```
dnf install mariadb-server
```

Now to set it up:

```
systemctl status mariadb.service
```

Is it enabled? If not do:

```
systemctl enable mariadb.service
```

Now start it:

```
systemctl start mariadb.service
```

Notice what appears in the log when you start it for the first time! (`journalctl -u mariadb.service`)

Initializing MariaDB database: Installing MariaDB system tables...
OK
Filling help tables...
OK

To start mariadb at boot time you have to copy
support-files/mariadb.server to the right place for your system

PLEASE REMEMBER TO SET A PASSWORD FOR THE MariaDB root USER !
To do so, start the server, then issue the following commands:

/usr/bin/mysqladmin -u root password 'new-password'
/usr/bin/mysqladmin -u root -h sdowdle.localdomain password 'new-password'

Alternatively you can run:
/usr/bin/mysql_secure_installation

which will also give you the option of removing the test
databases and anonymous user created by default. This is
strongly recommended for production servers.

See the manual for more instructions.

You can start the MariaDB daemon with:
cd /usr ; /usr/bin/mysqld_safe &

You can test the MariaDB daemon with mysql-test-run.pl
cd /usr/mysql-test ; perl mysql-test-run.pl

Please report any problems with the /usr/bin/mysqlbug script!

Starting mysqld: [OK]

By default a mysql root user password IS NOT set. You can verify this by connecting without a password:

[root@kvm-dowdle ~]# mysql
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 5.5.56 Source distribution

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>

Set a mysql root password: (replace new-password below with the desired password)

```
/usr/bin/mysqladmin -u root password 'new-password'
   or
/usr/bin/mysql_secure_installation (PREFERRED)
```

Restart mysqld:

```
systemctl restart mariadb.service
```

Verify that you can no longer connect without a password:

[root@kvm-dowdle ~]# mysql
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)
[root@kvm-dowdle ~]# mysql -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 5.5.56 Source distribution

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>

Now let's create a new database and make a mysql user who can use it:

```
mysql> create database dowdle;

mysql> grant all on dowdle.* to dowdle@localhost identified by
'password';
```

Now exit the mysql client as the mysql root user and try to connect as your new user to their database. Does it work?

Import existing tables / data:

If you look in `/public` on the course server you will find a file named `mysqlsampledatabase.sql`. scp that file to your student VM. Have a look at the file and

you'll see it is just a flat text file full of comments and SQL statements to create a database (if it doesn't already exist), create tables and then insert records into the tables. It is basically the output of a mysqldump backup. Edit the file with your preferred editor and search/replace every occurance of classicmodels with your last name. Import it into your user database by using a command that takes the following form:

```
mysql -u dowdle -p < mysqlsampledatabase.sql
```

Then connect to the database and see what's there.

```
mysql -u dowdle -p dowdle
MariaDB> show tables ;
describe customers ;
MariaDB> select customerNumber, customerName, creditLimit from
customers where creditLimit > 125000;
Update a record:
MariaDB> update customers set creditLimit='500000' where
customerNumber=298;
Verify it updated:
MariaDB> select customerNumber, customerName, creditLimit from
customers where creditLimit > 125000;
```

Backup an existing database:

Exit the mariadb client if you are connected and run the following command to back up the database:

```
mysqldump --databases dowdle -u dowdle -p \
   --hex-blob --routines --triggers > /backup/dowdle-$(date
+%Y%m%d).sql
```

That assumes you did homework 2 and have a `/backup` mount to copy it to.

When done to submit for homework check, scp /public/homework*6*.txt on the course server to /root/HOMEWORK/ on your student VM.